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The Soldiers' and Sailors' Monument.

EVERY one who is concerned to-day in the erection of a monument of any sort in this city wishes it placed in Central Park, where, as a rule, monuments do not belong and could not be properly placed to secure their best effect, and where they would injure the effect of the park itself. When a site within the Park cannot be secured, a position close to one of its chief approaches is desired. This is a more justifiable wish. But, again, its result cannot be good unless the character of the proposed monument and the manner of its placing both conduce to dignity and harmony of general effect. No greater mistake can be made in such a matter than the placing of a monument, however good, in such a way that it will embarrass the designer who may hereafter be called upon to treat the remainder of the space in which it stands, or to supply those monumental entrances which were contemplated by Messrs. Olmsted & Vaux when they designed the park itself.

Just now this matter is peculiarly important, when $250,000 have been secured for the erection of a Soldiers' and Sailors' monument in this city. Neither the wishes of those army and navy men who desired to have the monument placed on Riverside Drive, where the tomb of their great leader stands, and where it would be visible from the water as well as from the land, nor the recommendations of the experts asked by the committee of city officials to advise in regard to its site, were regarded by this committee. Moved by the too general wish to connect their monument with Central Park, and to place it where it would be seen, not by the greatest number of persons, but by those who roll by in their carriages, a site close to the Fifth Avenue and Fifty-ninth Street entrance has been chosen. The designer of the monument has also been chosen. Competent judges declare that the schemes which he presented were good in themselves, and would be less offensive on the selected site than any offered by other competitors. Nevertheless, if this monument is set on the indicated spot it will seriously hamper the work of any artist who may hereafter be commissioned to treat the Plaza and the adjoining park entrance in a systematic and proper way.

Mayor Strong, who has done much for the beautifying of New York during his three years' administration, tried to do one thing more when he declared that nothing whatever ought to be placed on or near the Plaza until two million dollars had been appropriated for its right adornment as a whole. This even now would be a difficult task. Tall and ugly buildings occupy two sides of the Plaza, and the lines of the streets and park roads which run out from it cannot be brought into harmony with an absolutely symmetrical scheme. But a symmetrical scheme is not the only possible good one even in urban adornment; and if two sides of the Plaza are badly built upon, the Park to the north and the great Vanderbilt house to the south with the vista of Fifth Avenue beyond it, supply conspicuous elements of beauty. A really able designer can still give us a beautiful Plaza if no more incongruous elements are introduced before he gets to work, and if he is not too closely hampered by that love of exact symmetry which in many of our architects has recently developed into an unreasoning passion, not unnaturally in view of the discord and heterogeneousness which most parts of our city display. A perfectly balanced and majestically uniform effect can never be produced on this spot; but a dignified, harmonious and effective one may be achieved if every foot of it is now jealously preserved intact until such time as its embellishment as a whole may be undertaken. Until this time comes, however, the most careful artist cannot erect any monument within sight of the Plaza and keep its general effect in mind; for, of course, he cannot divine how this effect may eventually be conceived. The only safe way is to do nothing here, but for the time being to place all contemplated monuments in localities for which so comprehensive a plan is not required. There are many such situations not far from Central Park, and it ought still to be possible to secure the placing of the Soldiers' and Sailors' Monument in one of them, and to consider again the advice given by the experts who were consulted by the committee in the first instance. Or, if this is impossible, the site should at least be shifted a little farther north. The monument should not stand in the large circle at Sixtieth Street, which is an integral part of the Plaza, but at the extreme northern end of the Plaza between Fifth Avenue and the entrance to the driveway of the park. Here such a form as the selected architect has chosen would be quite as appropriate as on the proposed site; and it might be worked with less difficulty into that general scheme for the adornment of the Plaza and the park entrances which, at some future day, the city will certainly wish to take in hand.

VENERATION for very large or old or otherwise remarkable trees is an indication of civilization and cultivation which is not always as common in America as it should be. In every country of Europe exceptionally large and old trees are revered, and it would be considered a sacrilege to injure them. Their portraits are frequently published and their histories are familiar to all classes of the community. As the primeval forest disappears its remnants become sacred, and if we in this country are not more alive to the necessity of preserving our remarkable trees it is, perhaps, because we have not yet lost the instincts for forest destruction inherited from ancestors who, forced to cut trees in order to raise bread, had their hardest struggle with the forest. Too often we hear of noble trees being needlessly sacrificed even in the oldest and most civilized states, and it is, therefore, pleasant to know that a determined effort will be made by some of the inhabitants of Media, Pennsylvania, to preserve from destruction a remarkable group of four Sassafras-trees standing in the neighborhood of that town. The largest of these trees at three feet from the ground is twelve feet six inches in circumference and about eighty feet in height; the others are nearly of the same size and all are healthy and symmetrical. These are the largest Sassafras-trees east of the Mississippi River of which there is any record,

and even in southern Arkansas, where this tree grows to its greatest perfection, it would be difficult to find many individuals to equal them. The owner of the trees having declared his intention of cutting them down this winter, the attempt will be made to buy the land on which the trees stand or the right for them to grow indefinitely. It would be more than a local and state misfortune if this movement failed of success or if these trees, which are probably several hundred years old and are still in perfect health, should not be allowed to live to show the size and beauty our Sassafras, the only species in all the world, can attain under favorable conditions.

Notes on Cultivated Conifers.—VIII.

IN Pinus the world finds some of its most valuable timber-trees and a few park and garden trees of great beauty and interest. The genus is well distinguished by its clustered secondary leaves which are enclosed in the bud by numerous scales which lengthen with the growing leaves and surround their base with a thin, more or less persistent, sheath. Pinus is further distinguished by its involucrate, fascicled, staminate flowers and by its woody cones, which mature at the end of their second, or rarely at the end of their third season. Pinus is widely spread over the northern hemisphere, forming on maritime plains, mountain slopes and dry interior plateaus vast continuous forests, or is scattered singly and in groups through deciduous-leaved trees. About seventy species are now recognized by botanists who still have much to learn of the Pine-trees of Mexico, Central America and the interior of China. In the United States thirty-four species, or about half of those now known to science, find their homes; the genus is largely represented in Mexico, northern India, and in all the region bordering on the Mediterranean, which in number of species is the stronghold of the genus in the Old World. Various methods for grouping the species in sections have been proposed. That based on the number of leaves in each cluster, which, less scientific than the one now generally in use, is perhaps the most satisfactory for cultivators who often have to deal with plants which are not large enough to produce flowers or cones. Adopting this method of arrangement the species of Pinus fall, with some exceptions, into three sections—the first with five leaves in a cluster, the second with three leaves in a cluster, and the third with two leaves in a cluster. On the trees of the first section the leaves are usually long, slender and blue-green with deciduous sheaths; the cone-scales are usually thin and mostly unarmed, and the wood is soft, light-colored and homogeneous; on those of the other sections the leaves are, as a rule, much stouter and usually dark yellow-green; their leaf sheaths are mostly persistent during one or many seasons, their cone-scales are thickened and generally furnished with spines, hooks or prickles, and their wood is hard, heavy and marked with broad bands of resinous cells.

For our region the most valuable ornamental trees are found in the first section. These are all inhabitants of northern or of elevated countries and most of them flourish in the north-eastern states. The type of this section, Pinus Strobus, our native White Pine, is the most valuable tree of the whole genus for the parks and gardens of the wide region which it inhabits naturally. Wherever a collection of trees was planted in the north-eastern states more than fifty years ago the White Pine is found to surpass all other conifers, when any others have survived, in height, thickness of trunk and health. Impervious to the cold of the Canadian winter and the burning suns and dry winds of the prairies of Kansas, the White Pine flourishes also as no other exotic conifer flourishes in central Europe; and in the gardens of northern Italy it is as vigorous and beautiful as it is in the forests of Michigan and Minnesota. The brittleness of the branches of this tree, which frequently break under a load of snow or frozen sleet, is the one drawback to the White Pine as an ornamental tree, the symmetry of isolated specimens being frequently ruined from this cause. The White Pine grows well on dry sandy drift gravels, but only attains its noblest dimensions on well-drained rich soils, when its roots can reach abundant and constant moisture. In cultivation here at the north it will usually outgrow from the start almost every other conifer, but newly planted seedlings do best when they are protected from wind and sun, for the White Pine is a shade-enduring species, and in the forest the seeds germinate most freely and the seedlings grow for many years most vigorously under the shade of other plants. No other tree breaks up so well the flatness of the forest roof, and no other tree that can be used here is so valuable to enliven the monotony of a sky-line with its dark green wide-spreading crowns raised high on stately stems. Only a few abnormal forms of the White Pine are cultivated. Pinus Strobus nivea, which is probably of nursery origin, is distinguished from the ordinary form by its rather lighter-colored bark, shorter paler leaves and denser foliage. More distinct than this is Pinus Strobus nana, a low compact, round-topped bush, seldom growing more than five or six feet tall, with abbreviated crowded branches and short leaves; this is, perhaps, one of the most distinct and beautiful of all the dwarf conifers in cultivation. A dwarf form with pendulous, nearly prostrate, branches is grown in the Arnold Arboretum, where Mr. Dawson has also propagated plants from a remarkable tree growing in the town of Dracut, Massachusetts, with short, slender, nearly erect branches usually in whorls of three, forming a dense low round-topped head.

In the section Strobus, to which our White Pine belongs, are two west American Pines, Pinus Lambertiana and Pinus monticola. The former, the Sugar Pine of California, is the largest of all Pine-trees, individuals over 200 feet in height with trunks ten feet in diameter being not uncommon. Although this tree was introduced into English gardens as long ago as 1831 by its discoverer, David Douglas, it has never proved very successful as a cultivated tree. Removed from its native forests, where its growth is rapid and vigorous, it increases slowly both in Europe and the eastern United States, where it is perfectly hardy as far north, at least, as Massachusetts. Differing from Pinus Strobus while young only in its stouter and darker leaves, it has in our climate no advantage as an ornamental tree over our own White Pine, which grows much more rapidly, and the Sugar Pine will probably never be much cultivated here except as a curiosity.

The second western American Pine of this section, Pinus monticola, is also a great tree, only surpassed in magnitude by the Sugar Pine. This is a widely-scattered species, being distributed from the western slopes of the northern Rocky Mountains, over a large part of the elevated regions of the west, growing from the level of the sea on the shores of the Strait of Juan de Fuca to about 10,000 feet on the California Sierras, where trees with enormous stems and short contorted branches withstand for centuries the fiercest mountain gales. Pinus monticola has proved perfectly hardy in the neighborhood of Boston, where it has already produced cones. The cultivated trees can be distinguished from Pinus Strobus by their narrow pyramidal habit, short remote branches and rather thin foliage, and in beauty do not compare with the native species. Like the Sugar Pine, Pinus monticola will probably never be largely used by eastern planters.

In Asia the section Strobus has a representative in Pinus Nepalensis (the more usually accepted name of this tree, Pinus excelsa, is unavailable, as it has been used before for another species), an inhabitant of Himalayan forests, where it is scattered from Afghanistan to Bootan between elevations of 5,000 and 12,000 feet above the sea-level. This is a beautiful tree with long, slender, tufted, drooping foliage, attaining sometimes in its native forests a height of 150 feet. For many years this Himalayan Pine has been used in temperate Europe and in the eastern United States for the adornment of parks and gardens. Growing while young with great rapidity in cultivation, it often suffers in

the eastern states from the splitting of the bark, and in New England, where it is otherwise hardy, it is usually short-lived. Further south Pinus Nepalensis is more successful, and there are now large healthy cone-bearing trees in the Central Park, New York, and in the neighborhood of many of the cities of the middle states.

In Europe Strobus appears in Pinus Peuce of the mountains of Macedonia, Servia and Montenegro, a tree which has been sometimes considered a geographical form of the Himalayan White Pine, from which it differs, however, in its much shorter and more persistent leaves. In the Arnold Arboretum, where Pinus Peuce is quite hardy, it differs from the Indian tree in its closer and more pyramidal habit and denser foliage. This is a slow-growing tree here, with no special ornamental value, and is chiefly interesting as the European representative of a group principally indigenous in the New World.

The Pines which we have mentioned all belong to a subsection of Strobus in which the wings of the seeds are longer than the seeds themselves, but there are other five-leaved Pines, with pale, soft, straight-grained wood, which have seeds with narrow wings much shorter than the seeds. To this group belong the Rocky Mountain White Pine (Pinus flexilis. See f. 19 in the current volume of GARDEN AND FOREST), a beautiful tree widely distributed over the mountain ranges of the interior of the continent. It is hardy in the neighborhood of Boston, but in the east grows very slowly, suffering severely here from fungal diseases, and plants thirty-five years old are not more than four or five feet high, with tufts of miserable stunted foliage on the ends of naked branches. In England Pinus flexilis appears to do better than it does on the Atlantic seaboard, and in the Royal Gardens at Kew there is a tree twenty-five feet in height and probably of the same age as the Boston specimens, which were raised in the Harvard Botanic Garden from seeds collected by Dr. Parry in 1862 in Colorado. A year ago the Kew tree produced cones.

Another Pine of this sort, Pinus albicaulis, also inhabits the mountains of western America; it is an alpine tree, distinguished by its thin creamy white bark and short, nearly oval, cones with much thickened scales. This tree is said to have been introduced into Scotland in 1851 by John Jeffrey, who discovered it in that year on the mountains which rise above the valley of the lower Fraser River. I have never seen it, however, in Europe, and it has not been tried in this part of the country. Like other trees which grow naturally only at high altitudes, it will probably grow very slowly at the sea-level, even if it could be induced to grow here at all.

Pinus Cembra, the Swiss Stone Pine, is another of the White Pines with narrow seed-wings. It is a native of the mountains of central Europe, of northern Russia, and of Siberia where it sometimes forms pure forests of considerable extent. Pinus Cembra is always a slow-growing tree, with short, slender horizontal branches which in youth form a dense compact pyramid, and stout rigid blue-green leaves clustered at the ends of the stout branchlets. This tree is an old inhabitant of gardens and is perfectly hardy in New England, where, however, it grows very slowly, retaining its dense, handsome pyramidal form until it is twenty-five or thirty years old, and then frequently becoming thin and ragged. A species, Pinus pumila, nearly related to the Stone Pine covers the high summits of the mountains of northern Japan with broad, almost impenetrable, thickets four or five feet high, and is widely scattered also over Saghalin, Kamtschatka and the Kurile Islands. This shrub has probably never been tried in our gardens, where it may be expected to be hardy and to grow very slowly.

In Japan the five-leaved Pines are also represented by Pinus parviflora and Pinus pentaphylla. The former is one of the most attractive of the exotic Pines which decorate our gardens. It is a common inhabitant of mountain forests above elevations of five thousand feet, through which it is found scattered either singly or in small groves, occasionally growing to a height of sixty or seventy feet. This tree is a great favorite with the Japanese, and one of the principal subjects which they employ in dwarfing. In our gardens, where there are now specimens from twenty to twenty-five feet in height, Pinus parviflora grows rapidly, sending out long picturesque, persistent branches clothed with tufts of blue-green leaves and loaded with short oval cones which, after ripening, turn nearly black and do not fall for months. This beautiful tree, which is still rarely seen in this country, is admirably suited for the adornment of small gardens. The other Japanese five-leaved Pine (Pinus pentaphylla), recently distinguished by Mayr, is a rare inhabitant of the mountain forests of southern Yezo. This little-known tree, long confounded with Pinus parviflora, has been raised in the Arnold Arboretum, where it seems to be hardy enough, although it is still too early to say much about it.

Pinus Koraiensis is a small five-leaved Pine, which is another really valuable plant in the gardens of the north-eastern states. A native of Corea, northern China, Manchuria and Kamtschatka, it was long ago introduced into Japan, probably by Buddhist priests, and is now one of the plants commonly seen in temple gardens. From Japan it was brought to the United States about thirty years ago and has proved entirely satisfactory here. In the color of the leaves it resembles Pinus Strobus, but it is more compact in habit and the foliage is much more dense, as the leaves do not fall until their fourth or fifth year, and therefore clothe the branches for a long distance back from the tips, while in Pinus Strobus the leaves mostly fall during their second year, leaving the branches bare, except at the extremities. Pinus Koraiensis now grows freely in the neighborhood of Boston, producing seeds, which, like those of all the five-leaved Pines with narrow seed-wings, are large and edible. *C. S. S.*

Notes from South-western China.

The following notes are from a personal letter from Dr. Augustine Henry, dated at Mengtse, September 9th of this year:

I may mention that I have found a magnificent Paulownia with evergreen leaves, which is the most gorgeous sight when in flower imaginable. Lonicera Hildebrandiana, discovered by General Collett in the Shan States, also occurs here in the mountains. It is a rambling shrub, climbing over rocks. The flowers are deep yellow and about seven inches in length. Leucosceptrum canum, of northern India, is a remarkable Labiate, common in mountain woods at about 5,000 feet altitude. It is a tree some twenty feet high, and in habit is exactly like a Buddleia.

Yunan is a large province, and is associated in the minds of botanists with the wonderful discoveries of Père Delavay. He collected mainly in the west of the province on the high mountains near Tali, which are practically spurs of the Himalayas. The region here, that is, Mengtse and to the south, crossing the Red River, and extending as far as the Shan States under French control, is very different from Delavay's ground, and will probably turn out as rich in species, new and interesting, but not so suitable for introduction into cultivation, as the mountains do not rise to the heights seen in the vicinity of Tali. Here, nevertheless, are many fine Rhododendrons, and there is a great variety of Cyrtandreæ. These are always beautiful plants, occurring as a rule in shaded parts of mountain forests, mainly on rocks. A good many Begonias also occur in the same habitat.

The forests are more beautiful as one approaches and enters French territory, simply because the Chinese have not been there long enough to destroy them. They are migrating southward all the time and opening up forest land to cultivation. Curiously enough, it is two American plants which enable them to extend cultivation high up on the mountains, namely, Maize and the common Potato (Solanum); and the opium Poppy, too, can be cultivated with profit to a high altitude. In ancient times the aborigines, who were the only inhabitants of the mountains, depended almost entirely on the Tartar Buckwheat (Fagopyrum Tartaricum), which succeeds much better at high elevations than the common Buckwheat (F. esculentum). South of the Red River there was scarcely

a single Chinese sixty years ago, but now there are many settlements and the forests are disappearing.

There does not seem to be one Frenchman in the northern part of Indo-China interested in botany, and this is a great pity, as the mountainous part of their territory is finely forested and rich in plants, and French officers, civil and military, are scattered everywhere in isolated posts. The botanical source of some of their interesting products is quite uncertain. For example, the Cassia-bark which is cultivated in the Chinese province of Kwangsi and reaches foreign countries by way of Pakhoi and Canton, is undoubtedly the product of Cinnamomum Cassia, but from Annam there is a very large export of so-called cinnamon, which is a different thing, and the tree yielding it is unknown. Another curious export happens to be known, as specimens were found in China. This is what the French call "faux gambier." It is the root of a wild Yam (Dioscorea rhipogonoides), and is much used by the Chinese in dyeing.

I forgot to mention in regard to cinnamon that the Chinese give fabulous prices for certain varieties which occur in the mountains of Tongking—as much as $50.00 for two pieces of bark fifteen inches long and four inches wide, to give a concrete example. Such bark is supposed to cure all diseases. It would be very interesting if some French official on the spot would collect botanical specimens of the trees, the bark of which has such a commercial value.

Travelers and residents in foreign countries are always possessed with the idea that anything with a common general name is thoroughly known to science; and we are still in the dark in consequence in regard to the sources of certain kinds of rhubarb, cinnamon, indigo, textile fibres, etc.

As an example of the interest in cultivated and useful plants I may cite the Sweet Potato. This is cultivated largely in China, and is unquestionably an introduction from America. But the plant cultivated in central China and in Yunan is Ipomœa fastigiata, and not the common form of I. Batatas. Mr. Hemsley is of opinion that the latter is only a cultivated variety of the former species, which is known in the wild state.

New or Little-known Plants.

Prunus Pseudo-cerasus.

THIS is a native of eastern Asia, where it is widely spread from Japan to central China, Saghalin and Manchuria, and is a noble tree in the forests of Yezo. There is still much confusion with regard to the Asiatic Cherries of this group, and whether the wild single-flowered tree which is figured on page 463 of this issue from specimens gathered in the forests near Sapparo is really the plant described by Lindley as Prunus Pseudo-cerasus or not we are unable to determine, as some of the numerous double and single flowered varieties cultivated by the Japanese are possibly derived from still little-known allied Chinese species. Under whatever name, however, it should be known by, this Cherry of northern Japan promises, as has lately been stated in these columns, to become a valuable ornamental tree in the north Atlantic states.

It is a glabrous tree, growing in the forests of Japan seventy or eighty feet in height, with a trunk frequently three feet in diameter, covered while young, like the branches, with lustrous light red-brown bark, oblong elliptical or obovate coarsely serrate leaves abruptly contracted at the apex into long points, corymbose white flowers from a quarter to a half of an inch in diameter, opening with the unfolding leaves, and small pea-shaped fruits with thin flesh.

Very conspicuous in early spring when covered with its abundant flowers, Prunus Pseudo-cerasus is also conspicuous and very beautiful in the autumn when the leaves turn dark red. The wood of this tree is highly esteemed in Japan, where it is largely used principally for carving and for blocks used in printing cloth and wall paper.

In the Arnold Arboretum young trees of this Cherry are in perfect health and are growing rapidly, and, although they have not flowered yet, they show in autumn the splendid leaf color which is one of the great attractions of the Japanese forest at this season of the year, just before the Maples, which change color a little later, light them up with more brilliant shades of scarlet.

Foreign Correspondence.

London Letter.

Nerines.—The genus Nerine has been a favorite greenhouse plant for flowering in late autumn from the earliest times, and one species, N. sarniensis, which is grown in large quantities by the Dutch and other bulb growers, is distributed when dry in the same manner as Hyacinths, Tulips, etc. There are fifteen species, according to Mr. Baker, and some of these have been crossed with each other by Dean Herbert, Max Leichtlin, Moore, O'Brien, Mansell and others, so that we now have a large number of seedlings and crosses of more or less horticultural value. Mr. Elwes has recently been at work upon the genus with a view of obtaining late-flowering varieties, for instance, such as might be had in December. There is no reason why, in the course of time, this should not be accomplished. Meanwhile, he has got together a large collection of sorts in his garden at Colesbourne, and the group he exhibited at the last meeting of the Royal Horticultural Society showed that he is a master in the art of growing and flowering these plants. In addition to the older standard sorts he exhibited a number of new seedlings, eight of which received certificates. They are all named in compliment to some lady, such as Lady Lawrence, Lady Bromley, etc. Mr. Elwes has evidently worked principally with the various forms of N. sarniensis, which include those known in gardens as Plantii, venusta, corusca and rosea. These, with N. curvifolia and its variety, Fothergillii, are the best of the genus in point of color, vigor, etc. This habit of growing in winter and resting in summer makes the cultivation of Nerines somewhat difficult in localities where sunlight, so essential to good growth, is obscured by fogs and general murkiness, as, for instance, at Kew; but where these are not experienced they may be grown as easily as Daffodils. They require liberal treatment while growing, say from October to April, to be followed by absolute rest induced by drought and exposure to air and bright sunshine until the flower-spikes show in September.

Protea cynaroides, var. elliptica.—This is a dwarf shrub compared with the type, of which an illustration, prepared from a plant grown at Kew, was given in Garden and Forest (vol. viii., p. 34). A plant of the former is now flowering freely in the Cape house at this establishment; it is a yard high, freely branched, and each branch is terminated by a flower or bud, or rather flower-head, measuring eight inches in diameter and composed of a cup-like whorl of stiff, pointed, lanceolate, petaloid bracts colored flesh-pink, the whole of the centre being occupied by a cushion-like mass of stamens, which are united, except round the margin. For a cool house, such as suits Cape Heaths, this is a commendable shrub, as it flowers freely when small, while the flowers are not only exceptionally attractive in size, form and color, but they have the merit of lasting six or eight weeks or even longer. The Kew plant was raised from seeds sown in 1890, and it first flowered two years ago. I can recommend the genus Protea as worthy the attention of horticulturists in such states as California.

Lonicera Hildebrandiana.—It is nearly four years since this plant was introduced to Kew from Burma, but we have not succeeded in flowering it yet, although it grows most vigorously in the varying conditions under which it is being tested. It was discovered in Upper Burma by General Sir Henry Collett nine years ago, who described it as "a conspicuous shrub with large, dark glossy leaves and fine crimson flowers seven inches long." At Kew it is a stout climber with stems twenty feet long and ovate leaves six inches by four inches. It is not hardy, but grows freely in the Winter Garden. Meanwhile, Mr. Hildebrand wrote from Burma in April last, "I am sorry that you are unable to flower the large Honeysuckle. It is a sight to behold just now in my garden and surprises the densest observer in horticultural matters. It is a mass of

flowers, white when they first open and of a lovely gold when far spent. It flowers on last year's wood." There is evidently some mistake with regard to the color of the flowers. I hope to hear of its flowering shortly in California.

Fig. 58.—Prunus Pseudo-cerasus.—See page 462.

Momordica mixta.—There are three fine fruits of this splendid tropical gourd on a plant in one of the stoves at Kew, where it first fruited three years ago. It has long, quick-growing, angular climbing stems, which attain a length of twenty or thirty feet before flowering, and they bear numerous large palmately lobed, smooth, shining dark green leaves and one-flowered axillary peduncles. The male and female flowers are borne on separate plants, the male flowers being about three inches

across with velvety cream-white petals blotched with purple at the base. The male plant is worth a place in a warm conservatory as a handsome-flowered climber. The female flowers, which are smaller, when artificially fertilized develop large egg-shaped or oblong fruits nine inches long, the surface clothed with closely set spine-like points an eighth of an inch long; when ripe these fruits are of a rich scarlet color, on which account I should class them among the most ornamental of the Gourd family. The species is a native of India, China, etc. Good seeds were matured in quantity by this plant at Kew last year.

The Mangosteen (Garcinia Mangostana).—Fruits of the Mangosteen have lately been received at Kew from the Botanic Gardens, Trinidad, where trees have been established and have borne fruit since 1875. The tree is a native of the Malay Archipelago, and is cultivated in various parts of India. It forms a small conical tree twenty or thirty feet high, with bright green, Laurel-like, leathery leaves and fruits the size of an orange, with a hard smooth rind, colored dull purple, enclosing a spongy mass of pulp, which is divided into eight sections, as in the orange, two or three only of the sections containing each a single seed about the size of a plum-stone. The pulp is the delectable part, being white or pink, very juicy and of an agreeable flavor, suggesting that of the Granadilla. In the east the Mangosteen is considered to be the choicest of all tropical fruits; I question, however, if it would win such a position in temperate climes when pitted against the apple, pear, grape and pineapple. Still it has the charm of novelty, and would probably find a market here. The fruit appears to keep and carry as well as an orange.

The Durian (Durio-zibethinus).—This is another Malayan fruit-tree which is celebrated for its large delicious fruits; delicious, that is, to those who have overcome its powerful disagreeable odor. Fruits of it have lately been produced by a tree in the island of Dominica, in the West Indies, and one of them was sent to Kew, where I ventured to taste it, half-rancid and evil-smelling though it was. I never want to taste it again. It is a large evergreen tree with the habit of a Pear (according to an example in the Palm-house at Kew, which is fifteen feet high), and oblong, long-pointed, gray-green leaves clothed with scales beneath. The fruit is like an enormous sweet chestnut, as large as a child's head, covered with hard spines and enclosing a mass of cheese-like pulp, in which the four or five large seeds are embedded, the pulp being the edible portion. The tree is said to be commonly cultivated throughout the Malayan peninsula and islands, where its fruit, during the period it is in season, forms the greater part of the food of the natives. The flavor of the Durian is unique, no other fruit combining such a delicious flavor with such an abominably offensive odor, which has been compared to that of rotten onions. When once the repugnance to this odor has been overcome the fruit becomes a favorite, Europeans becoming extremely fond of it. Mr. Wallace, in his *Malay Archipelago*, says: A rich custard highly flavored with almonds gives the best general idea of it, but there are occasional wafts of flavor that call to mind cream cheese, onion sauce, sherry wine and other incongruous dishes. . . . The more you eat of it the less you feel inclined to stop. In fact, to eat durians is a new sensation worth a voyage to the east to experience! From the condition of the fruit sent from the West Indies to Kew I should say the durian is a bad traveler. Still it ought not to be hard to overcome this difficulty, at any rate for the journey from the West Indies to the United States, where a fruit with such a character as Mr. Wallace describes ought to find a ready market.

New Hybrid Orchids.—Messrs. J. Veitch & Sons exhibited two new hybrids last week which were awarded certificates. They were Cattleya Olivia, a hybrid between C. Trianæ and C. intermedia, showing the influence of both parents in the habit and form of its flowers, which were of a rich peach-blossom color suffused with yellow; C. Melpomene, a hybrid between C. Mendelii and C. Forbesii, with rose-colored flowers, the lip shaded with yellow and brown, with a heavy marginal fringe. A hybrid between Cypripedium Haynaldianum and C. Chamberlainianum was shown by Mr. E. Ashworth, and obtained a certificate. It is the first hybrid raised from the last-named species, but there was a doubt expressed with regard to the other parent. The hybrid has a white dorsal sepal lined and spotted with rose and brown, the petals are spirally twisted and colored green and brown, while the lip is rose-colored, tinged with green and yellow. A pretty variety of Lælia Lucasiana was shown under the name of L. longipes, and obtained a botanical certificate.

London. *W. Watson.*

Cultural Department.

Japanese Plums.

It is hardly ten years since Japanese plums began to attract the attention of fruit growers in the United States to any considerable extent, but it is now certain that they have won a permanent place among the cultivated fruits of this country. The best of them rank only good to very good in flavor and quality when compared with such varieties as Bavay's Green Gage, Washington, Jefferson and other choice kinds of the European species, Prunus domestica. The Japanese Plums are not exempt from black-knot, and, wherever I have had opportunity to observe them, are fully as susceptible to injury from leaf-spot (Cylindrosporium padi) as are the ordinary kinds of Plums. Our Plum orchards suffered from an unusually severe attack of aphis the past season, and native Plums of the Chickasaw, Americana and intermediate groups, together with the Japanese sorts, were injured worse than the varieties of Prunus domestica. Japanese Plums are apt to have the fault of the Wild Goose and many other native kinds in that the ripening fruit drops from the pedicel quite readily. Some of them, like Kelsey, are so tender that they cannot be fruited in the north. Ogon is the hardiest in fruit-bud of the kinds fruited here, but it is not as hardy as the Italian Prune and others of the hardiest Domestica kinds.

The colors of Japanese plums range from the clear yellow of the Ogon to the beautiful clear red of Red June and the darker, duller red-purple of Satsuma. Sometimes Burbank has a brilliant red cheek deepened to almost red-purple with yellow background, but neither the blue nor purple shades of the prunes and damsons characterize any Japanese plums. In some varieties the yellow is shaded with green, resembling somewhat the color of a Green Gage plum, and nearly all varieties have a delicate bloom, which, when it softens such brilliant hues as those of Red June and Wickson, adds much to the beauty of the fruit.

As compared with Domestica plums, none of the Japanese kinds rank best in quality, yet some of them have a sprightly, agreeable flavor and attractive colors, and are good enough in quality to sell well. Some kinds, like Abundance and Burbank, begin bearing very young, and are so exceedingly productive that it is advisable to practice thinning, not only to increase the size of the remaining fruit, but also to prevent injury from overbearing. Willard and Ogon ripen before the earliest of the Domestica kinds, and October Purple, one of Mr. Burbank's latest productions, as its name indicates, carries the season for Japanese plums late into the fall.

It is not at all probable that Japanese plums will supplant the older cultivated kinds where the latter can be grown to perfection as readily as can be done in central and western New York and in various other sections of the country, but they will doubtless supplement them to some extent. In some portions of the Hudson Valley, where the ravages of black-knot practically prohibit commercial orchards of Domestica Plums, the Japanese varieties are being grown successfully, and while not altogether exempt from black-knot, so far as my observation goes, they are practically free from that disease even where Domestica varieties near by are severely attacked.

As they are succeeding in some locations where black-knot is prevalent, and because of their wide range in season of ripening, their vigor and productiveness, their attractive colors and good shipping qualities, Japanese plums, as already remarked, have won a permanent place among our cultivated fruits. On this account it is especially unfortunate that in the process of introducing them into cultivation here much confusion in their nomenclature has arisen. Thanks to the efforts of some of our pomologists, and especially of Professor Bailey, whose Plum bulletins should be in the hands of every grower of this fruit, some progress has been made toward

establishing a correct nomenclature. The fact that seedlings of Japanese plums are apt to resemble the parent fruit very closely has made it all the more difficult to detect synonyms, and it is impossible always to identify a variety with certainty from illustrated descriptions.

In the interest of a uniform nomenclature it is desirable to call attention to the very interesting report of Mr. Orpet on Japanese plums in the current volume of GARDEN AND FOREST (page 347), and point out some of the instances in which the varieties as grown by him are evidently not true to name.

First, it may be said that the Japanese Plums are classed as Prunus triflora, not P. Simonii. Mr. Orpet voices the general opinion when he calls the Burbank the best of the Japanese plums, but its fruit is not "as large as a moderate-sized peach." Wickson is the only hardy Japanese plum yet introduced which answers that description. Kelsey is so tender that Professor Bailey, in his bulletin 131, says of it: "We still hear of Kelsey being fruited in New York, but in every case which we have investigated some other Japanese variety has been misnamed the Kelsey. The farthest north which I have known the true Kelsey to fruit is southern Delaware."

Mr. Orpet describes the Kelsey as greenish yellow and smaller in fruit than Burbank, but the true Burbank varies from an inch and a quarter to an inch and five-eighths in diameter, while the true Kelsey varies from two to three inches in diameter, and in color is of a bright red purple over yellow background. He speaks of Satsuma and Wickson as having a spreading habit of growth. Satsuma is somewhat open in its habit, but Wickson is decidedly upright, resembling Prunus Simonii in this respect, as also in its rather narrow conduplicate leaves. Possibly Mr. Orpet has the names Wickson and Burbank interchanged, for Wickson bears very large, attractive fruit of good quality, while Burbank has smaller fruit and is decidedly spreading in its habit.

Abundance is not quite equal to Burbank in quality, neither is it more attractive in appearance or more productive, but because it is a little earlier some have found it more profitable, especially during the past season, when by the time Burbank was ripe the markets were so loaded with other plums that prices ruled lower than they did when Abundance was ripening.

Agrl. Ex. Station, Geneva, N. Y. *S. A. Beach.*

Recent Importations among Chrysanthemums.

FORTY-SEVEN varieties are but a small proportion of the whole number of new kinds of Chrysanthemums annually imported into this country, but among this number grown at the Cornell Experiment Station this year and last, are many that will be welcomed in America as distinct advances. The twelve Californian varieties (which are here included as foreign sorts), the four Australian and thirty-one European varieties (mostly English, from H. Cannell & Sons, Swanley, Kent) were tried in the same bed with eighty-eight American novelties of 1896 and 1897, and thirty-one seedlings sent to the station in advance of their introduction to the trade. These, with some thirty-four old and successful types, made a total of two hundred varieties with which the foreign sorts were obliged to compete on equal terms. The most remarkable feature of the collection was the scarcity of white varieties and their general failure. White is the most important single "color" in the trade, and there are said to be more new white sorts introduced every year than any other color.

Of one hundred and sixty-six novelties here reviewed nearly thirty per cent were pure white. Mrs. F. Hepper was distinctly inferior to our American favorite, Mrs. Henry Robinson, Alps to Mrs. J. Peabody, Taiwan to Mrs. R. Craig, White Swan to L'Enfant des deux Mondes, and Pride of Swanley, though not fully mature yet, can surely not rival Yanoma. Lady Esther Smith, which was recorded in Cornell Experiment Station Bulletin 136 as a new type of the greatest promise, has been a total failure this year in spite of the unprecedented success of the trial as a whole. Among the yellow varieties a welcome addition is a large, rather flattish, flower, named W. S. Devis, with rays an inch or more wide, as in Lady Esther Smith. It has only seven or eight series of rays, and a large disc, which, however, would not be objectionable even if it were not well hidden. It is as bold a yellow as Constance Terrell. Governor Budd is a yellow Chrysanthemum of the size and form of Philadelphia, and fades as badly, but begins with an orange of the shade of Pitcher & Manda. Triumph de St. Laurent is almost, if not quite, equal to H. L. Sunderbruch, one of the standard, midseason, commercial sorts. A. H. Wood is a quilled sort with a prominent disc, useless for the trade, but by reason of its marked individuality a worthy subject for skilled amateurs, and one of the finer creations which private gardeners are on the lookout for. It will not stand shipment. Duchess of York is one of the best additions of recent years to the amateur list. We have not learned its special requirements yet. This variety and Defender were the only two sorts which suffered a loss of foliage at the base. The foreign bronze and buff varieties were numerous, but contained only three notable kinds. Mongolian Prince is the perfection of the Chinese type, and its roundness should make it excellent for shipping. It is a dull but rather rich color and too formal and regular to be a great favorite in America. Helen Owen is a fine whorled sort, but not suitable for the cut-flower trade. Buff Globe is a sport from the well-known pink Good Gracious, but is fuller and has a stronger neck. Khama is a good Japanese red, with characteristic and beautiful foliage. The color fades no more than any other red of the shade of Pluto or Loantika.

The Amaranth varieties, apparently, are more esteemed abroad than with us. Among the large reflexed sorts, Wood's Pet is by far the best of this color that we have seen in four years' testing of novelties. The form is precisely that of Viviand-Morel. Of the Japanese Incurved type it would be hard to choose between Australie, General Roberts and Pride of Madford. In all three the silvery reverse is the chief feature, the amaranth interior being suggested rather than disclosed. The first hides its disc, and the last two show it at an early stage, giving a striking effect upon which opinions are sharply divided. (There are two varieties circulating in England under the name of Pride of Madford, one of which is worthless.)

Among the pink varieties I see no advances. Most of the hairy sorts are of the familiar Japanese Incurved type, of which Mrs. Alpheus Hardy and Louis Boehmer are familiar examples. A new departure among the hairy sorts is the pink variety, Mrs. P. Rothenbush, which is reflexed, and soon shows its yellow disc. It can hardly be recommended. I see no improvement in the dark colors. For the exhibitor and private grower of skill Oriental Glory and Bellem are two sorts worthy of trial. The flowers are very large, last a long time on the plant and have marked individuality of form and color. Bellem has never been pink with us, as in England. It is the best primrose-yellow we know despite the great height of the plant and the awkwardly curled foliage.

The curiosity list has received two interesting additions in Mrs. J. Carter, a ball of shredded, tangled white, and Mrs. Filkins, which is smaller than Mrs. W. H. Rand, but just as much cut up and equally charming. Centaurea and Souvenir de Madame G. Eynard are two others which Cannell has introduced as "boutonnière, æsthetic and spidery" Chrysanthemums. The two last-named are not equal to our variety Shavings for attractiveness. The best of this list is Alice Carter, which, though curious, is agreed by all to be beautiful, and seems to be entirely new in form and color. The foliage is proportionately small and delicately cut. These novelties, while obviously different from other Chrysanthemums, should, according to the practice of the National Chrysanthemum Society of England, be classified as Japanese. This word, which was once used to designate geographical origin, has now come to be synonymous with miscellaneous or unclassified.

Ithaca, N. Y. *Wilhelm Miller.*

Correspondence.

Uncultivated Crops in the Ozark Mountains.

To the Editor of GARDEN AND FOREST:

Sir,—Among the most interesting wild crops produced in the stony Ozark country, owing to its economic value, is Japan Clover, Lespedeza striata. The time and manner of the introduction of this pretty annual trifoliate into the United States do not seem to be definitely known. The Department of Agriculture mentions it as having been first noticed near Charleston, South Carolina, about 1849, and says that the seeds probably came from Japan in boxes of tea; also that it was found a little later some forty miles from Charleston, and soon after at Macon, Georgia, and that it has now become naturalized as far west as Texas and north to the Ohio River. It has taken possession of the rocky Ozark hills, and furnishes an ample supply of nutritious forage in a region that was, previous to its arrival, devoid of green food for stock. It is eagerly eaten by the cattle and hogs that range through the woods, and they are not only kept in good condition by it during summer, but with the addition of the mast that is abundant, they come off the range in the fall fat enough for market. Milch cows also live on it.

Japan Clover is less attractive on dry or poor soil and where it is eaten over by stock than when grown under better conditions. In a fairly favorable location it makes luxuriant growth and becomes really ornamental. Indeed, its beauty and its ability to adapt itself to various conditions of light, shade, drought and moisture in this limestone district are leading to its trial as a lawn covering, particularly in shaded grounds where grass is especially unsatisfactory. It is certainly invaluable in the Ozarks.

Pennyroyal neatly clothes with a subdued color acres of high, dry and stony land where no other herbaceous plants try to live. The plants extend for miles along the roadways, and all of this refreshing aromatic herbage is wasted.

Indian Currant (Symphoricarpos vulgaris, locally known as Buckberry) forms another noticeable and abundant crop, occupying situations similar to those in central Illinois which are overgrown by Hazel bushes, and in about the same proportion. It is, in fact, the leading shrub, largely predominating in the undergrowth of southern and south-western Missouri, where but few Hazel bushes are seen. Sumach is not plentiful, and Elder is almost unknown. The wild growth of the Indian Currant furnishes many suggestions for its use in cultivated grounds in the same region. It forms fine, irregular belts and large straggling plantations at the verge of open glades and along the border of woodlands; and in sunny situations, even on hilltops and steep hillsides it is seen in clumps and single well-grown plants, springing from stony soil and set among bowlders and on projecting ledges of rocks. These plants frequently attain good proportions, and the gracefully drooping branches sweep the ground on all sides. Everywhere among the hills this desirable shrub is seen loaded with its small dark red berries.

Brighton, Ill. *Fanny Copley Seavey.*

The Beautifying of a Neglected Field.

To the Editor of Garden and Forest:

Sir,—I am indebted to Garden and Forest for the beautifying of at least one of my fields. This was a barren, worn-out hillside of gravel with deep, worn gullies when I bought the place. Following your advice, I allowed it to grow up as it would; I knew that Pines and Junipers would soon cover it. They come up everywhere of themselves, and are now spread over nearly the whole field; they are from ten to fifteen feet high. But it surprised me, in looking over the field this fall, to find Maples, Sassafras, Gum, Tulip and Sycamore trees, and one Holly, besides two kinds of Ferns, three patches of Arbutus and some Crowfoot. The Daisies, Golden-rod, Sumach and Grasses were not to be wondered at. Simply left alone, this is now quite a pleasing field to me. The farmers about think it sadly neglected, but I thank you for advising such neglect.

St. Denis, Md. *Cynthia Force.*

Flowering Plants in a Mild Autumn.

To the Editor of Garden and Forest:

Sir,—The season has been kind to us here, notwithstanding excessively dry weather in the early fall. My notes record the flowering of Crocuses on the 30th of March, and in sheltered parts of the city there have been no killing frosts yet. Nasturtium leaves are bright and are still growing, and there are occasional flowers. Now and then a small Polyantha Rose shows on the bushes, and the last Dahlias are gathered along with the yellow Chrysanthemums.

This is remarkable for the 11th of November, and is an especial encouragement to those who desire to cultivate late-blooming flowers. The tardy but ambitious Cosmos was never so perfect as now and almost justifies its more general cultivation. Where frosts are to be expected in September there is not much satisfaction to be had from it. Fuchsias are bright, but stopped flowering early in the month, and Geraniums have become mere foliage plants. The influence of Lake Erie is so potent in certain localities on its shore that unless there are contending influences of elevation or closed depressions that hold the cold air there is not much fear of frost before November, and yet the season of most plants is past some time earlier, and flower gardens have a lifeless appearance even before the trees have shed their leaves. This is especially true of the wild garden. There are enough late-blooming plants in common cultivation to maintain a cheerful appearance throughout the season, and where frosts hold off very late, as they do in some favored localities, efforts should be made to cultivate a fair proportion of these late-blooming plants.

Not much life is left in the wild garden after the Asters and Golden-rods are gone, and not a few of these are under the ban on account of their disposition to spread by means of stolons or subterranean roots and choke out everything near them. This is also true of most of the Solomon's Seals, and Potentilla Anserina spreads like a Strawberry and neglects to send up its solitary bright yellow flower unless the soil is quite sandy. The Trilliums, Bloodroot and many other early bloomers are as unobtrusive as they are beautiful, while it is an unattained art so far to persuade the Dicentras, Hepatica and Claytonia, as well as some wild members of the Mint family, to continue in the garden long, as they demand soil that is mostly leaf-mold. The most satisfactory wild plant to me is Thalictrum dioicum, especially the male plant, which is a Maiden-hair Fern with all the improvements of perfect hardiness, bushy growth and the added wealth of pendent yellowish stamens that dance in the breeze. Another charming plant is Uvularia grandiflora, which is in every way worthy a place in the most pretentious garden.

Buffalo, N. Y. *John Chamberlin.*

A Delicious Tuber.

To the Editor of Garden and Forest:

Sir,—Having read of the edible character of the roots of Apios tuberosa I was curious to find out what they were like. This beautiful wild plant, clambering over the wayside shrubbery in many parts of rural New England, with its luxuriant habit and the exquisite scent of its chocolate-colored flowers, is familiar to all who know the country. But its curious tubers, strung along the underground shoots like beads on a string, are not so commonly known. I had used the plant to cover a bare wall near the house, and the other day I dug up a few of the tubers. They were about the size of small Seckel pears. I noticed that, even when slightly cut, or pricked, they exuded a gum-like juice, white and sweetish, something like India-rubber, in its elastic nature, and not easily dissolved in the mouth. Possibly this gum might prove to have some economic value. I baked the tubers in the oven for about fifteen minutes and found them delicious. When done they were mealy and creamy white in color. Their flavor was strikingly delicate; something between that of a very fine potato and a sweet potato, with a suggestion of the chestnut, also. If farmers and market-gardeners would take pains to cultivate Apios tuberosa they would undoubtedly make handsome profits, for the tubers would be in demand both as a novelty and as a welcome addition to our edible vegetables. It is not unlikely that, with cultivation, new varieties would be developed, perhaps approaching the sweet potato in size, and possibly even improving upon the present flavor.

Malden, Mass. *Sylvester Baxter.*

The Forest.

Forestry in Women's Clubs.—I.

SOME account of the meeting of the New Jersey State Federation of Women's Clubs, held in Trenton in March, 1896, was given in Garden and Forest (vol. ix., page 132), with reference to the efforts made on that occasion in the interests of forestry. Mrs. John Gifford, of Princeton, made the principal address, and explained the forest conditions of New Jersey, together with the special beauties and uses of the woods of each region, and gave convincing reasons for the adoption of a conservative forest policy. It was suggested that women could aid in the preservation of forests through their influence in schools, libraries and in public discussions; by offering prizes to school children, and by having in every school district in the state exhibits of maps and photographs illustrating the results of wanton forest destruction and of scientific forest management; by joining forestry associations; in clubs and classes, by taking up the systematic study of forestry in its economic aspect; and in the sympathetic love of trees and of natural beauty and order, out of which would grow village-improvement societies, with forestry committees and the like. The prophecy was ventured by the speaker that if the women of New Jersey would take a positive and active interest in the preservation and protection of the forests of that state, within one year a State Forest Commission would be organized, a radical and practical fire policy would be enforced, so as to save the remnants of forests, and courses of instruction would be

founded which would teach the people of the state to value the forests and to use them wisely. A feature of the meeting on that occasion was an exhibition of maps showing forest reservations in the west, and the forest area of New Jersey; views of the Palisades, in which Nature and Nature's defacements were contrasted; photographs showing the desolation wrought by criminally careless methods of lumbering; illustrations of the expensive engineering work in southern France, due to the mountains having been stripped of their forest cover. Photographs of noteworthy trees and attractive landscapes were other features of this convincing exhibit, together with pamphlets on tree-planting, forestry and village improvement, and a specially prepared pamphlet containing a bibliography of books relating to forestry, village improvement and rural life.

As an outcome of the interest manifested at Trenton, at the national meeting of the General Federation of Women's Clubs held in Louisville, Kentucky, in June, 1896, a resolution was adopted "that as federations of women's clubs and as individual clubs, as far as possible, we pledge ourselves to take up the study of forest conditions and resources, and to further the highest interests of our several states in these respects." These resolutions were afterward printed and circulated among 1,500 clubs in the United States.

The growing interest in forestry was signally shown a few weeks ago in the meetings of the Pennsylvania and the New Jersey State Federation of Women's Clubs, the first held in Harrisburg, Pennsylvania, October 27th and 28th, and the latter in Camden, New Jersey, on the 28th and 29th of the same month. On the occasion of the New Jersey meeting in the spring of 1896, GARDEN AND FOREST remarked editorially that the arrangement of the forestry exhibit was so effective that it seemed a pity that it must be transient, and the suggestion was made that every library and school-room should have something of this kind as a general help in the education of public sentiment. A partial fulfilment of this suggestion has now been realized in the formation of a traveling forestry library, arranged by Mrs. Gifford, as chairman of the committee on Forestry and Protection of the Palisades of the New Jersey State Federation of Women's Clubs, who also introduced the forestry resolution at Louisville a year ago. The library, neatly encased in oak, with a traveling dress of white duck, was a conspicuous feature of the Camden meeting. The catalogue states that the library is intended as an introduction to the study of forestry, and it is arranged in seven classes. As illustrating the range covered, Group A comprises books on Trees and Forestry, and contains *The Woods of the United States*, C. S. Sargent; *Elements of Forestry*, F. B. Hough; *Trees of the Northern United States*, Austin C. Apgar; *Management and Protection of Forests*, D. Brandis; *Forest Tree Planters' Manual*, J. O. Barrett; specimen sheets of Sargent's *Silva of North America*. Group B consists of Reports of the Division of Forestry for 1890-91-92-93; besides *What is Forestry*, B. E. Fernow; *Wasted Soils and How to Prevent Them; Relation of Forests to Farmers*, B. E. Fernow; *Planting in Western Plains*, *Planting in Waste Places*, *Planting on the Farm*, all by C. A. Keffer; *Age of Trees; Defects of Wood*, A. D. Hopkins; *Uses of Wood*, Filibert Roth. Other subjects included in this class of the library are Information to Wood Consumers; Government Timber Tests; Suggestions to Lumbermen; Facts and Figures regarding Forest Resources; Forest Fire Legislation; Is Fire Protection Practicable; Report of the Committee appointed by the National Academy of Sciences upon the inauguration of a Forest Reservation Policy; Rules and Regulations governing Forest Reserves; Public Lands and Their Water Supply; Notes Regarding Department Publications; Arbor Day Planting in Eastern States; and Some Common Birds in their Relation to Agriculture. Group C contains publications of the American Forestry Association; Group D, State publications and papers; Group E, Monographs and Short Articles; Group F, Periodicals and Press Clippings, including sets of *Forest Leaves*, *The Forester*, a series of editorials, notes, etc., and a portfolio of illustrations from GARDEN AND FOREST, with specimens of foreign forestry periodicals from Switzerland, Belgium, France, Germany, Austria, India and Ceylon; also specimens of American Lumber Journals. Group G contains Reports of Park Boards, etc. The library is to be sent to women's clubs in New Jersey in the order of applications, the expense of carriage to be borne by each club, some member of which shall be responsible for its care and return at the end of a month. Several applications were at once made and the journeying promptly begun.

A circular letter constituted part of the report of the Committee on Forestry and Protection of the Palisades, and in this it was recommended that members of the State Federation see that libraries, schools and reading circles are supplied with forestry literature. The endowment of a forestry scholarship, it was suggested, would speedily lead to the establishment of a chair of forestry in colleges, and that with the approaching need for trained forestry officials in the national reservations the time is ripe for public-spirited effort in this direction. Widespread and intelligent pressure upon our rulers was recommended to overcome the selfish ends of greed, lest, as in the case of the recently declared national reservations, the nation lose control of vast resources which should be held for the benefit and welfare of all. It was specially recommended that members should thoroughly familiarize themselves with every aspect of the Palisades question, with a view to their preservation. In connection with forestry interests, Waldo G. Morse, Esq., one of the New York State Commissioners for the Preservation of the Palisades, made an impressive plea for the Palisades, the address being distributed later in pamphlet form. Miss Vermilye, of Englewood, New Jersey, gave a graphic account of the actual damage resulting from blasts in quarrying the Palisades. In the verbal report of the chairman of the Forestry Committee it was stated that interest in forestry is steadily growing. It was explained that forestry is not a sentimental enthusiasm for beautiful trees in themselves, but that it is an economic science. That a forest is a crop, just as corn and wheat are crops, and exists to be utilized for the benefit of man. Forethought and complex considerations enter into the raising and utilizing of a crop of timber, which make forestry a difficult and intricate science, depending upon the varying conditions of different countries. Our vast resources and optimistic habits of thought have too long delayed the understanding of this beneficent art. Forestry must be practical and must take the financial aspect into consideration. Lumbermen most of all ought to be interested in forestry, because their future supplies are at stake. The forest is a crop and something more, and its direct and indirect benefits are as important as its cash returns. In Europe the state regulates the rotation of the timber crop according to fixed laws, and we are trying to persuade our Government to save the remnants of our vast and beautiful forest possessions, and to protect them from fire and offer inducements to woodland owners in the reduction of taxes. Popular enlightenment must be depended on most of all. Women should first intelligently inform themselves, and then devise adequate means of instruction, to the end that public opinion may become educated.

New York. *M. B. C.*

Notes.

The Department of Agriculture in Circular No. 17 of the Division of Forestry has brought together in a convenient form a summary of recent legislation bearing on state forestry commissions and forest reserves, including the laws of New York, Pennsylvania, Wisconsin and Minnesota, and those sections of the Sundry Civil Appropriation Bill passed on June 4th last which relate to the national forests.

Our correspondent, Mr. Carl Purdy, whose knowledge of the bulbous plants of California and their cultural requirements is unrivaled, describes in the October issue of *Erythea* three new California Lilies; Lilium occidentalis, from boggy places

in barrens and bogs about Humboldt Bay, related to L. maritima, which it resembles in habit, bulbs, leaves, and in the dark red of its perianth tips, but from which it is separated by its much larger flowers, with long revolute lobes; Lilium Bakerii, with a bulb similar to that of L. Columbianum, is distinguished from that species by the form of the perianth and the delightful fragrance of the flowers which perfume the air for a considerable distance, and is a native of sandy woods along Puget Sound in northern Washington and southern British Columbia; and L. parvum, var. luteum, a showy form with perianth segments revolute from the base and clear brilliant reddish orange throughout, tipped with red and marked with small bright red spots. This variety is from Plumas County, where it was collected by Mrs. Austin.

Two plants of the Heath family from widely separated parts of the world, Azalea Vaseyi and Enkianthus campanulatus, were conspicuous a few days ago in the brilliant reds of their dying foliage. In the northern states this Rhododendron, with its lovely clear pink precocious flowers, is one of the best of our early-flowering shrubs, and at the end of October lightens up the shrubbery with its brilliantly-colored leaves. It was first figured in Garden and Forest (vol. i., fig. 60); and, although a native of North and South Carolina, where it was discovered only a few years ago, it has proved perfectly hardy in eastern Massachusetts. Enkianthus campanulatus, the representative of a small genus of southern and eastern Asia, is one of the most beautiful flowering plants in Japan. In its native forests it is a tree occasionally thirty feet high, with a trunk sometimes a foot in diameter covered with smooth light red bark, and abundant campanulate Andromeda-like white flowers borne in elongated, many-flowered, racemose panicles. Raised in the Arnold Arboretum from seeds gathered by Professor Sargent in 1892, it has so far proved hardy in the climate of Massachusetts, although, of course, it is too soon to form any opinion of its real value as a garden plant in this country. During the last week of October the plants in the Arboretum were particularly noticeable from the brilliant color of the leaves.

The Rural New-Yorker, in explaining the long-keeping qualities of New York state grapes, says that grapes, apples and other fruits grown in western New York have superior keeping qualities, due to the soil and climatic conditions. Grapes grown on clay-land are firmer and ship better than those grown on gravel. In Ohio an association known as the Clay-growers' Association handle only grapes grown on clay-lands. The three sections in New York where grapes are grown to the greatest perfection all lie near large bodies of water, an influence favorable to keeping qualities. Of the long list of varieties cultivated in this state the best of the long-keeping kinds are Catawba, Diana, Isabella and Vergennes. To insure keeping they must be carefully handled; it is also important that the temperature be gradually reduced from the vines to cold storage, and there must be no sudden changes. The grapes should be left out-of-doors in crates the night after they are picked; early in the morning they should be removed to a cool building or dry cellar; then to a still cooler room adjoining the storage-room, and here the temperature should gradually fall until the desired point is reached. New York grapes intended for exhibition at the World's Fair were placed in cold storage November 1st, 1892, and held there until spring, when they were shipped to Chicago in time for the opening of the Fair, May 1st. The main supply was then placed in the cold-storage building on the exhibition-grounds. This building was destroyed by fire on July 12th and the reserve stock of grapes was lost, otherwise New York grapes would have been on exhibition every day of the Fair. As it was, but fifteen days intervened between the last showing of cold-storage stock and the arrival of new-crop grapes. Catawba grapes are offered at reasonable rates in the markets of this city as late as April.

The Gardeners' Magazine in a recent issue states that the development of the great industry which has been founded on the beet has been possible only in consequence of the progressive increase in the yield of sugar by the roots. In order to obtain exact information on the subject application was made by the Kew authorities to Monsieur H. L. de Vilmorin, who has had a large share in bringing the beet to its present condition as a commercial source of sugar. In reply Monsieur de Vilmorin wrote to Mr. W. T. Thiselton that both his father and himself had devoted much time and attention to sugar beets. Both the beet-root and the leaf-beet are derived from Beta maritima, L., a native of the shores of the Mediterranean and of the western coasts of Europe. It was known to the ancient Greeks and Romans in both garden forms. In the eighteenth century large varieties of the beet-root were transferred from the garden to the field and used as food for cattle, first in Germany, and afterward in France and Great Britain. When Achard initiated the manufacture of sugar from beet-root the white field variety was judged the most suitable for sugar-making; it contained from eight to ten per cent of its weight in pure sugar. Selection was then brought to bear on the existing variety, and in fifty years the percentage of sugar was slightly increased, being raised to twelve or thirteen per cent of the gross weight of the root. After 1850 more accurate means of ascertaining the amount of sugar in each individual root were introduced by the elder Vilmorin, and in a dozen years a race was established yielding sixteen and even eighteen per cent of sugar. The fibrous tissues of the root which hold most sugar had been developed and the cellular tissues reduced to the utmost extent; hence the root became small, hard, dry and easily deformed. Since then the object has been to unite a better shape with an equal amount of sugar. Beet-roots containing more than eighteen per cent of sugar cease to vegetate properly and die.

No more beautiful fruit has ever been seen in our fancy-fruit stores than the Spitzenberg apples, from California, now shown in the best collections. The fine crimson streaks are laid on a flush of a lighter shade, with clear lemon-color showing through in places. The aroma of this apple is delightful, and the flavor and texture are both excellent. These are a specialty with W. & C. Smith, the pioneer fruiterers in this city, at 84 Broadway. Other attractive offerings in their uncommonly interesting display are immense Easter Beurre, Comice and Beurre d'Anjou pears, which range from seventy-five cents to $1.00 a dozen, and spicy winter Seckels from fifty to seventy-five cents. Coe's Late Red plums are still shown in good condition, and cost seventy-five cents for a six-pound box. Among California grapes are Cornichon, White Muscat, Morocco and Verdelle at seventy-five cents for six pounds. Almeria or Malaga grapes, from Spain, cost forty cents a pound, and there are hot-house Gros Colman grapes. Persimmons have recently arrived from Florida, after a scarcity of this fruit during the past month; these are of unusually large size and in their best condition; they cost $1.00 for a box containing one dozen and a half of the fruits. Grapefruits, from Florida, cost $2.00, and oranges from the same state sixty to seventy-five cents a dozen. Abakka pineapples command sixty to seventy-five cents each. While the supply of fresh fruits is no less showy in variety and color than earlier in the season, the buyer has, besides, a wide choice of fruits preserved in various ways. Many of these are imported as, Guava jelly and a syrup of the same fruit, besides Guava paste and marmalade, from Florida and the West Indies; the latter costs twenty-five cents a pound. Lime-juice syrup also comes from the West Indies, while a comparative novelty in our city, Tamarind syrup, comes from the East Indies by way of the Netherlands, and costs fifty cents a bottle. Blood orange phosphate is a popular fruit syrup, used for making a drink, and costs twenty-five cents a bottle. Neat and attractive glasses of Bar-le-Duc, red currants and white currants preserved separately, and costing twenty-five cents a package, and Cerises au Marasquin, the bright-colored French cherries in syrup, from Bordeaux, are among the imported attractions in glass, while slender glass jars containing strikingly handsome fruit, are labeled with the name of the Fabrikant and of the fruit in good German, with no suggestion, however, of where the fruit is put up. These glasses show French marrons, cherries glacé in vanilla syrup, strawberries, plums, prunes and pears, all of one kind, or assorted in the same jar. The chestnuts are imported; the choice fruits are grown in America, and are preserved in a rich syrup in this country by an experienced German. These jars, weighing one and a half pounds, cost forty-five cents, and two and a half pound packages readily command seventy-five cents. Assorted glacé fruits, from France, in neat paper boxes holding one pound, cost sixty cents, and two-pound boxes of glacé apricots cost $1.25. A section of stem with Muscat dates attached fills a box which holds a pound; this costs twenty-eight cents. Royal Locoum pulled figs sell for twenty cents a pound, and the best pressed figs bring the same price. The grade known as Extra Natural figs, from Turkey, in their original plump form, realize thirty cents a pound. French prunes sell at twenty-five cents, Russian Imperial cluster raisins, at thirty-five cents, and Arabian dates, seeded, and stuffed with almonds, walnuts or pecan nuts, at thirty cents a pound. Preserved Canton ginger, in five-pound jars, costs sixty cents. Among many domestic and foreign nuts, salted Pistachio nuts, in the partly open shells, are the most interesting. These sell for fifty cents for a half-pound package.